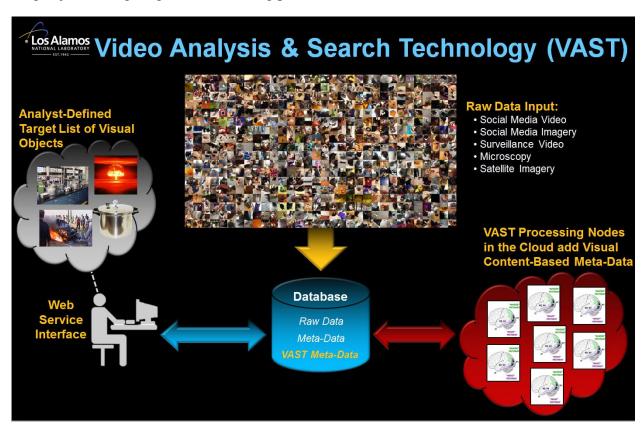


# Los Alamos National Laboratory call for commercialization and/or CRADA partners for Laboratory-developed Video Analysis and Search Technology (VAST)

Los Alamos National Security, LLC (LANS) is the manager and operator of the Los Alamos National Laboratory for the U.S. Department of Energy National Nuclear Security Administration under contract DE-AC52-06NA25396. LANS is a mission-centric Federally Funded Research and Development Center focused on solving the most critical national security challenges through science and engineering for both government and private customers.

As part of its national security mission, LANS has developed and implemented ground breaking Video Analysis and Search Technology (VAST) that has innumerable applications ranging from manufacturing surety and healthcare diagnostics to big data analytics and artificial intelligence. VAST is a deep learning machine vision platform that employs sparsely coded hierarchical and lateral linkages within a neural network modeled on the human neuro-visual system. Although it has been specifically trained on visual/pixel data in many instances, the VAST platform can be configured for training on any available data set. The more training data that VAST consumes, the better it becomes at identifying patterns, detecting objects, mitigating risk, and solving problems for its end users.





LANS has achieved great success in driving and deploying the VAST platform to its government customers and expects that there are numerous opportunities to further enhance VAST in the commercial marketplace. In order to better fulfill its national security mission, LANS is seeking a private entity to magnify the efficacy of the VAST platform by ensuring the proper delivery of the software to existing and future government users while simultaneously growing the nascent market of commercial end users.

To that end, LANS is opening this formal Request for Information to private industry to gauge the level of interest and potential for a strong private public partnership in advancing the VAST platform. This offering is made without prejudice to any form of agreement, collaborative arrangement, alliance, or partnership mechanism. Those companies interested in pursuing this opportunity should direct a Letter of Interest, as well as any comments or questions to David Seigel in the Richard P. Feynman Center for Innovation at LANL (see "Submission Process" below for contact information and submission process) on or before 11:59 MDT on **May 15, 2014**.

Attached you will find (1) a listing of LANS Intellectual Property, (2) a proposed business model, (3) certain partner attributes that LANS prefers, and (4) the submission process. Please properly mark any information that is considered proprietary or business-sensitive. LANS is happy to supply a Non-Disclosure Agreement to any interested party that requires it.

We look forward to working with you in introducing the VAST platform to the private sector in collaboration with our partners in national security.

## **LANS INTELLECTUAL PROPERTY**

## Patent Applications:

- S-129,622 entitled "Image Fusion Using Sparse Overcomplete Feature Dictionaries," U.S. nonprovisional patent application number 14/026,295 filed September 13, 2013, priority date September 13, 2012.
- S-129,623 entitled "Object Detection Approach Using Generative Sparse, Hierarchical Networks with Top-down and Lateral Connections for Combining Texture/Color Detection and Shape/Contour Detection," U.S. nonprovision patent application number 14/026,812 filed September 13, 2013, priority date September 13, 2012.
- S-129,185 entitled "System and Method for Automated Object Detection in an Image," U.S. nonprovisional patent application number 14/026,730 filed September 13, 2013, priority date September 13, 2012.
- S-133,188 entitled "Efficient Convolutional Sparse Coding," U.S. provisional patent application number 61/927,779 filed March 31, 2014.

## Copyrights:

• International Copyright on all VAST software

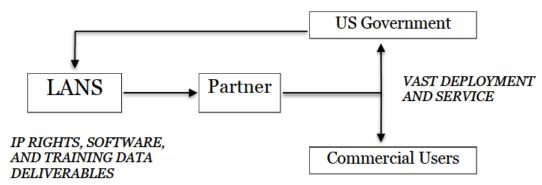
### LANS BUSINESS MODEL

LANS possesses and will maintain numerous relationships with the government customers in furtherance of its national security mission. Any private partner should be able to grow and nurture both government



and private industry while not hindering direct relationships between LANS and our national security customers. LANS will focus on next generation research and development in the national interest while the private partner will focus on delivery and deployment of the VAST platform to a maximal number of government and non-government users.

#### NATIONAL SECURITY CUSTOMER R&D



The proposed business model should not be considered limiting in any manner, and any participants are welcome to submit new and evolved models in their respective Letter of Intent.

### PREFERRED PARTNER ATTRIBUTES

- Ability to deliver customer-centric training data sets to LANS-operated systems so that the VAST capability can continue to grow its knowledge base in service of the national security mission
- One or more U.S. persons with whom LANS personnel may interact
- One or more U.S. persons cleared at the TS(Q)/SCI level to interact with LANS and/or U.S. government customers
- Ability and/or desire to at least partially locate and/or operate within the Northern New Mexico in close proximity to Los Alamos, Santa Fe, and/or Albuquerque

The foregoing are merely preferences, and LANS welcomes all Letters of Interest from any suitable party.

### **SUBMISSION PROCESS**

Letters of Interest should be submitted via email to <a href="mailto:vast@lanl.gov">vast@lanl.gov</a>, and made attention to David Seigel in the Richard P. Feynman Center for Innovation at LANL. Letters of interest must be received on or before 11:59 MDT on May 15, 2014. If you do not get an email receipt within 24 hours of submitting your Letter of Interest, please call David Seigel to confirm receipt.

David Seigel
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505-665-2743

